

Name: Answers

Date: _____

1. Explain how the Particle Theory of Matter explains why gold and water have different states of matter at room temperature.

Water is a liquid because the particles are farther apart, move faster, have weaker attractions, and require less heat to become a liquid. Gold particles are closer, attracted more, move less, require more heat to change state.

2. What is "Archimedes Principle"?

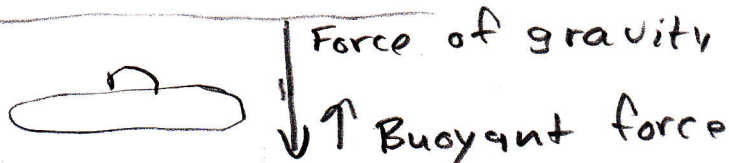
The buoyant force acting on an object equals the weight of the fluid displaced by the object.

3. Define buoyancy.

The tendency to rise or sink in a fluid due to the difference between the force of gravity and the buoyant force caused by the push of a fluid's particles.

4. Use a fully labeled drawing to explain why a submarine sinks.

The buoyant force is less than the force of gravity.
(note arrows)



6. Explain how you could determine the volume of a block of wood below the water surface if 100 ml of water is displaced.

Put block in overflow container.
Measure the volume of H_2O that flows out of the container.
The displaced volume should equal the volume of the block being submerged.